

# Spindle ball bearing HY SM 61902 C TXM P4+ 08.05.2024



## Components

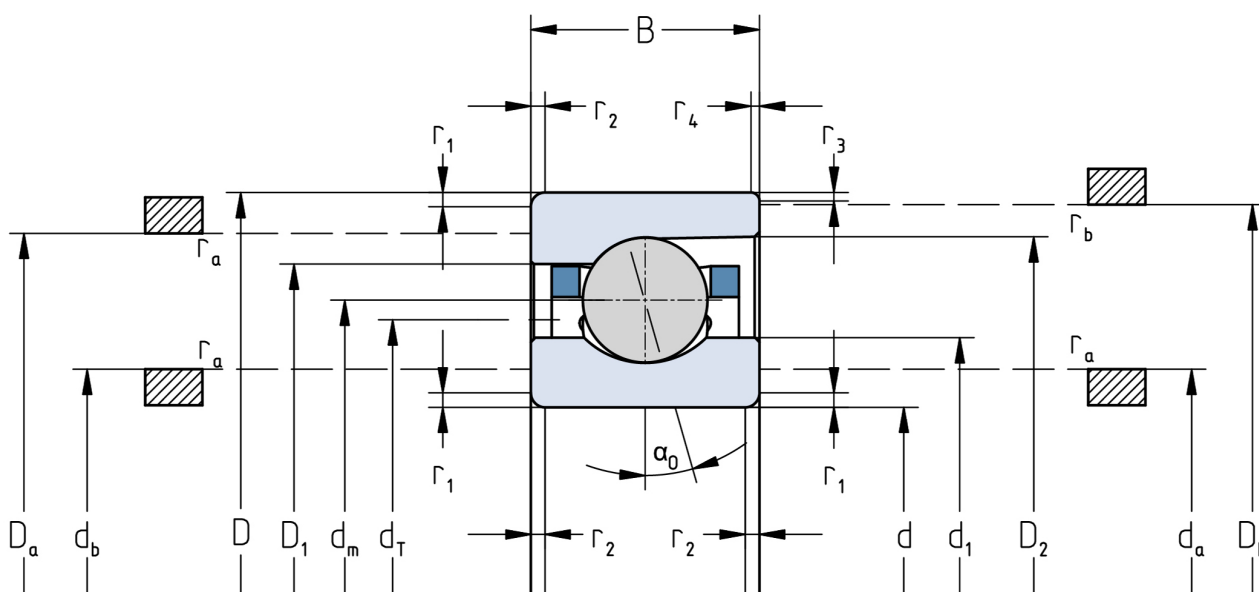
|                              |                   |
|------------------------------|-------------------|
| Bearing designation:         | HY SM 61902 C TXM |
| Bearing design:              | SM                |
| Series / size:               | 61902             |
| Ball material:               | Ceramic           |
| Cage:                        | TXM               |
| Precision:                   | P4+               |
| Main dimensions [d x D x B]: | 15 x 28 x 7 mm    |

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 1510 N          |
| Dynamic load capacity | $C_r$ : 3600 N             |
| Fatigue load limit    | $C_U$ : 57 N               |
| Speed limit           | $n_{grease}$ : 86250 1/min |
| Speed limit           | $n_{oil}$ : 115000 1/min   |
| Light preload         | L: 18 N                    |
| Axial rigidity        | $C_{ax}$ : 16 N/ $\mu$ m   |
| Medium preload        | M: 55 N                    |
| Axial rigidity        | $C_{ax}$ : 26 N/ $\mu$ m   |
| Heavy preload         | S: 110 N                   |
| Axial rigidity        | $C_{ax}$ : 35 N/ $\mu$ m   |
| Spring preload        | Ff: 60 N (for $n_{max}$ )  |

## Geometrical Data

|                                          |                         |                                              |                          |
|------------------------------------------|-------------------------|----------------------------------------------|--------------------------|
| Bore diameter                            | d: 15 mm                | Oiling nozzle position                       | $d_T$ : 20.2 mm          |
| Outer diameter                           | D: 28 mm                | Pitch circle diameter                        | $d_m$ : 21.5 mm          |
| Width of single bearing                  | B: 7 mm                 | Inner diameter of outer ring                 | $D_1$ : 24.3 mm          |
| Ball diameter                            | $D_w$ : 3.969 mm        | Undercut of associated component             | $r_{a \max}$ : 0.3 mm    |
| Number of balls                          | Z: 13                   | Undercut of associated component (open side) | $r_{b \max}$ : 0.3 mm    |
| Chamfer (min)                            | $r_{1,2 \min}$ : 0.3 mm | Abutment diameter inner ring                 | $d_{a,b \min}$ : 17.1 mm |
| Chamfer (min), open side                 | $r_{3,4 \min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b \max}$ : 26.3 mm |
| Outer diameter of inner ring             | $d_1$ : 18.7 mm         | Inner diameter of outer ring (open side)     | $D_2$ : 25.5 mm          |
| Outer diameter of inner ring (open side) | $d_2$ : -               | Bearing weight                               | m: 0.013 kg              |
|                                          |                         | Contact angle                                | Alpha 0: 15°             |



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.